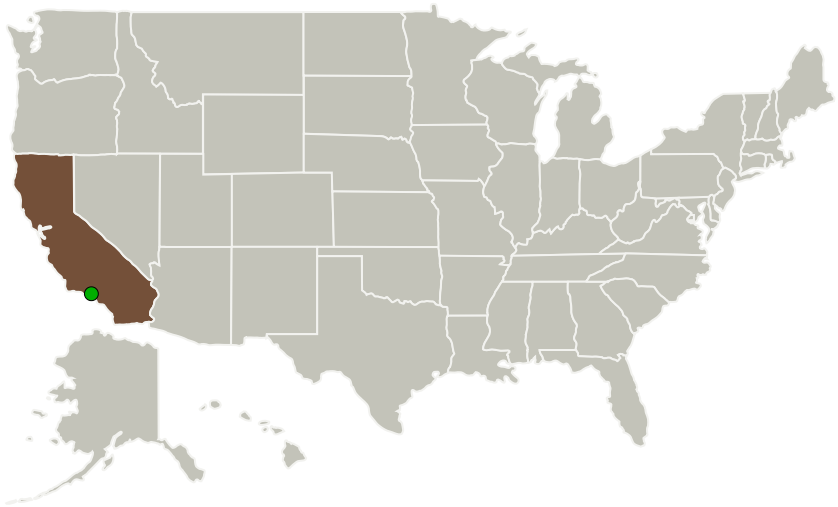
A 750MHz and a 8GHz High Bandwidth Digital FFT Spectrometer, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

The scope of this project is to to develop a wide bandwidth, low power, and compact single board digital Fast Fourier Transform spectrometer (FFTS) optimized for the signal processing requirements of next generation instruments and receivers on-board both earth observing and planetary exploration missions. We achieve our design objectives of wide bandwidth and real-time streaming performance in a compact and low power form factor by utilizing cutting edge ADC & FPGA hardware solutions in combination with high performance FFT IP cores.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Mosaix Technologies, Inc.	Lead Organization	Industry	Monrovia, California
Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California

Primary U.S. Work Locations
California

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Project Transitions

February 2011: Project Start

August 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/140661)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Mosaix Technologies, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

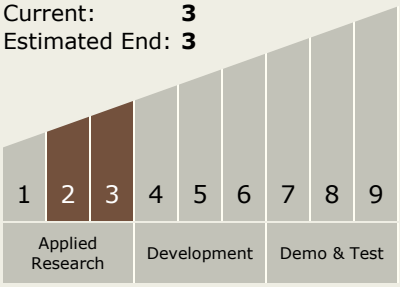
Carlos Torrez

Principal Investigator:

Raoul Tawel

Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.1 Detectors and Focal Planes

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System